**Outcome of Rescue Ablation in Patients with Refractory Ventricular Electrical Storm Requiring Mechanical Circulation Support**

_Fa-Po Chung_  
_Ying-Chieh Liao_  
_Yenn-Jiang Lin_  
_Shih-Lin Chang_  
_Li-Wei Lo_  
_Yu-Feng Hu_  
_Ta-Chuan Tuan_  
_Tze-Fan Chao_  
_Jo-Nan Liao_  
_Chin-Yu Lin_  
_Ting-Yung Chang_  
_Jennifer Jeanne Vicera_  
_Chye-Gen Chin_  
_Cheng-I Wu_  
_Chih-Min Liu_  
_Shih-Ann Chen_

**Introduction**: The management of refractory electrical storm (ES) requiring mechanical circulation support remains clinical challenging in structural heart disease (SHD).

**Methods**: A total of 81 patients (mean age: 55.3±18.9, 73 men [90.1%]) undergoing ablation were investigated, including 26 patients with ES requiring circulation support (Group 1) and 55 patients without (Group 2). The 30-day and 1-year outcome, including mortality and recurrent ventricular tachyarrhythmias receiving appropriate implantable cardioverter defibrillators (ICD) therapies, were assessed.

**Result**: The patients in Group 1 were characterized by older age, more ischemic cardiomyopathies, worse left ventricular ejection fraction and more comorbidities. Thirty days after ablation, overall events were seen in 15 patients, including pumping failure-related mortality in 6 of 10 patients (60%). During a 30-day follow-up, Kaplan-Meier curve demonstrated higher mortality in group 1 than those in group 2 (P<0.001). After 1-year follow-up, in spite of the higher mortality in group 1 (P<0.001), the overall events and VA recurrences were similar between these two groups (P=0.154 and P=0.466, respectively). There was a significant reduction of VA burden in both groups and 2 patients had recurrent ES.

**Conclusion**: Higher 30-day mortality was observed in patients undergoing rescue ablation for refractory ES requiring circulation support, and pumping failure was the major cause of peri-procedural death. Rescue ablation successfully prevented VA recurrences and resulted in comparable one-year prognosis between ES with and without circulation support.